**Abstract ID** : 790

**Title** : Ramifications of an extended foraging event by eleven transient killer whales on a population of harbor seals in Hood Canal, Washington, USA.

**Category** : Ecology

**Student** : Doctoral

**Preferred Format** : Oral Presentation

**Abstract** : Eleven transient type killer whales were present exclusively within Hood Canal, Washington for an unprecedented sixty days from 2 January - 3 March, 2003. Hood Canal is an isolated 100 km fjord on the west side of Puget Sound and supported an estimated population of 1400 harbor seals in 2002. The eleven transient whales were identified through photo identification and consisted of individuals from the T13, T73 and T123 groups. Other than rare sightings of a few individuals, mammal-hunting transient killer whales had not been previously observed in Hood Canal. Observations of predation on harbor seals were reported and harbor seals represent the only significant known transient prey available in Hood Canal. The extended time and number of whales within Hood Canal provides for the possibility that the harbor seal population was reduced significantly. A Monte Carlo simulation was conducted using literature values on killer whale metabolic requirements and harbor seal caloric content to estimate potential consumption. The median estimate produced by simulation was 711 (5th percentile = 541, 95th percentile = 973) seals consumed. This estimate suggests the whales could have consumed more than half of the harbor seal population in Hood Canal. Initial land and aerial surveys conducted in spring and summer 2003 are consistent with a significant reduction in seal numbers. More extensive population surveys are scheduled for autumn 2003 and will be presented.